The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A system for connecting a number of workstations of the type that include a keyboard, mouse and video monitor to a number of remote computer systems, comprising:

a plurality of first signal conditioning units coupled to the workstations for receiving electronic signals produced by the keyboard and mouse and for creating a serial data packet that includes the electronic signals;

a plurality of first communication links coupled to the first signal conditioning units for carrying the serial data packets;

a central crosspoint switch including a number of inputs and a number of outputs, said central crosspoint switch receiving the serial data packets from an input and routing the serial data packet to one or more of said outputs;

a plurality of second communication links coupled to the outputs of the central crosspoint switch; and

a plurality of second signal conditioning units coupled to the remote computer systems, for receiving the serial data packets transmitted on one of the plurality of second communication links switch and for supplying the data packets to a keyboard and mouse input of the remote computer.

2. The system of Claim 1, wherein the plurality of second signal conditioning units receive video signals produced by the remote computer systems and transmit the video signals to the central switch on one of the plurality of second communication links.

3. The system of Claim 2, wherein the video signals include a red, green and blue video signal as well as a horizontal and vertical sync signal, and wherein each of the second signal conditioning units includes an encoder circuit that encodes the horizontal and vertical sync signal onto the two of the red, green or blue video signals before the video signals are transmitted to the central switch.

4. The system of Claim 3, wherein the video signals include a mode signal that indicates a polarity of the horizontal and vertical sync signal, and wherein the encoder circuit encodes the mode signal onto one of the red, green or blue video signals before the video signals are transmitted to the central switch.

5. The system of Claim 3, wherein the first signal conditioning units include a decoder circuit for removing the horizontal and vertical sync signals from the red, green or blue video signals.

6. The system of Claim 5, wherein the decoder circuit removes the mode signal from the red, green or blue video signals.

7. The system of Claim 6, wherein the decoder circuit includes a circuit for adjusting the polarity for the horizontal and vertical sync signals based on the decoded mode signal.

8. The system of Claim 7 further comprising an onscreen programming circuit that included in the first signal conditioning unit, the onscreen programming circuit producing video signals that are displayed by the video monitor.